

WHAT IS CLAIMED IS:

1. A method for rendering a frame of animation comprises:

retrieving scene descriptor data associated with the frame of animation,
wherein the scene descriptor data includes a first specification of at least one object, wherein
5 the first specification of the object is associated with a first rendering option;

receiving a selection of the first rendering option or a second rendering option;

querying a database for a first representation of the one object in response to
the first specification of the object when the selection is of the first rendering option;

10 loading the first representation of the object into computer memory when the
selection is of the first rendering option; and

rendering the object for the frame of animation using the first representation of
the object when the selection is of the first rendering option;

wherein the first representation of the object is not loaded into computer
memory when the selection is of the second rendering option.

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2. The method of claim 1

wherein the scene descriptor data includes a second specification of the object,
wherein the second specification of the object is associated with a second rendering option;

20 querying a database for a second representation of the one object in response
to the second specification of the object when the selection is of the second rendering option;

loading the second representation of the object into computer memory when
the selection is of the second rendering option; and

rendering the object for the frame of animation using the second
representation of the object when the selection is of the second rendering option;

25 wherein the second representation of the object is not loaded into computer
memory when the selection is of the first rendering option.

3. The method of claim 1

wherein the one object comprises a geometric object; and
wherein the first representation of the object comprises a geometric description of the geometric object.

5 4. The method of claim 1
wherein the one object comprises a camera object; and
wherein the first representation of the camera object comprises data selected from the group: camera field of view, camera position, camera orientation, camera aspect ratio.

10 5. The method of claim 1
wherein the one object comprises a light object; and
wherein the first representation of the light object comprises data selected from the group: type of light source, light color, light source, light quality, light shape.

15 6. The method of claim 1 wherein querying the database comprises:
providing an asset management system the first specification of the object; and
receiving a location of the first representation of the one object from the asset management system.

20 7. The method of claim 1 further comprising:
storing the frame of animation; and
displaying the frame of animation.

25 8. A method for rendering a frame of animation comprises:
retrieving scene descriptor data associated with the frame of animation,
wherein the scene descriptor data specifies at least one object, wherein the object is associated with a reference to a first representation of the object, and the object is associated with a reference to a second representation of the object, wherein the first representation of

the object is associated with a first rendering option, and the second representation of the object is associated with a second rendering option;

receiving a selection of the first rendering option or a second rendering option;

5 loading the first representation of the object into computer memory when the selection is of the first rendering option; and

rendering the object for the frame of animation using the first representation of the object when the selection is of the first rendering option;

wherein the first representation of the object is not loaded into computer memory when the selection is of the second rendering option;

10 wherein the first representation of the object comprises references to representations of a first plurality of objects;

wherein the second representation of the object comprises references to representations of a second plurality of objects; and

15 wherein at least one object within the first plurality of objects is also within the second plurality of objects.

9. The method of claim 8 wherein loading the first representation of the object into computer memory when the selection is of the first rendering option comprises loading representations of the first plurality of objects into computer memory when the
20 selection is of the first rendering option.

10. The method of claim 9 further comprises:

loading the second representation of the object into computer memory when the selection is of the second rendering option; and

25 rendering the object for the frame of animation using the second representation of the object when the selection is of the second rendering option;

wherein the second representation of the object is not loaded into computer memory when the selection is of the first rendering option.

30 11. The method of claim 9

wherein the one object comprises a geometric object; and
wherein the first representation of the object comprises a geometric description of the geometric object.

5 12. The method of claim 9
wherein the one object comprises a camera object; and
wherein the first representation of the camera object comprises data selected from the group: camera field of view, camera position, camera orientation, camera aspect ratio.

10 13. The method of claim 9
wherein the one object comprises a light object; and
wherein the first representation of the light object comprises data selected from the group: type of light source, light color, light source, light quality, light shape.

15 14. A computer program product for a computer system including a processor comprises:

code that directs the processor to retrieve scene descriptor data associated with the frame of animation into program memory, wherein the scene descriptor data specifies at
20 least one object, wherein the object is associated with a first representation of the object, wherein the first representation of the object is associated with a first rendering option, wherein the object is associated with a second representation of the object, wherein the second representation of the object is associated with a second rendering option;

code that directs the processor to determine a selection of the first rendering
25 option or the second rendering option;

code that directs the processor to load the first representation of the object into program memory when the selection is of the first rendering option; and

code that directs the processor to rendering the object for the frame of animation in response to the first representation of the object when the selection is of the first
30 rendering option;

wherein the first representation of the object is not loaded into program memory when the selection is of the second rendering option;

wherein the codes reside on a tangible media.

5 wherein the first representation of the object comprises references to representations of a first plurality of objects;

wherein the second representation of the object comprises references to representations of a second plurality of objects; and

wherein at least one object within the first plurality of objects is also within the second plurality of objects.

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15 15. The computer program product of claim 14 wherein code that directs the processor to load the first representation of the object into computer memory when the selection is of the first rendering option comprises code that directs the processor to load representations of the first plurality of objects into computer memory when the selection is of the first rendering option.

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16. The computer program product of claim 15 further comprising code that directs the processor to load the second representation of the object into program memory when the selection is of the second rendering option; and code that directs the processor to rendering the object for the frame of animation in response to the second representation of the object when the selection is of the second rendering option.

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17. The computer program product of claim 16 wherein the object comprises a geometric object; wherein the representations of the first plurality of objects comprise a plurality of geometric primitives.

18. The computer program product of claim 16

wherein the object comprises a camera object; and

wherein the representations of the first plurality of objects includes properties selected from the group: camera field of view, camera position, camera orientation, aspect ratio.

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19. The computer program product of claim 16

wherein the object comprises a light object; and

wherein the representations of the first plurality of object includes properties selected from the group: type of light source, light color, light source, light quality, light
10 shape.

20. The computer program product of claim 16

wherein the first representation of the object further comprises values for properties of objects in the first plurality of objects.